

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
9 June 2005 (09.06.2005)

PCT

(10) International Publication Number
WO 2005/052718 A2

(51) International Patent Classification¹: **G06F**
(21) International Application Number: **PCT/IL2004/001067**
(22) International Filing Date:
18 November 2004 (18.11.2004)
(25) Filing Language: **English**
(26) Publication Language: **English**
(30) Priority Data:
159061 26 November 2003 (26.11.2003) IL
(71) Applicant (for all designated States except US): **RAFAEL - ARMAMENT DEVELOPMENT AUTHORITY LTD.** [IL/IL]; P.O.Box 2250, 31021 Haifa (IL).
(72) Inventor; and
(75) Inventor/Applicant (for US only): **BEN-ARI, Tsafir** [IL/IL]; P.O.Box 327, 17905 Shimshit (IL).
(74) Agent: **FRIEDMAN, Mark**; 7 Jabotinsky St., 52520 Ramat Gan (IL).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

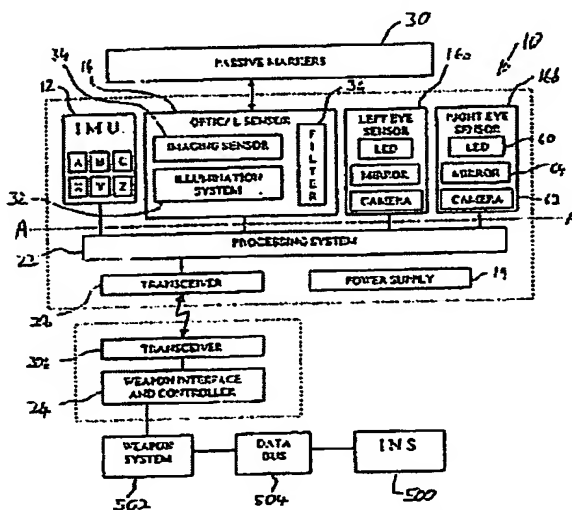
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **HELMET SYSTEM FOR INFORMATION OR WEAPON SYSTEMS**



(57) Abstract: A helmet position measuring system for use in a predefined environment. The system includes a helmet-mounted illumination system for directing electromagnetic radiation of one or more wavelength from the helmet in one or more range of angles, a set of three or more passive reflectors deployed at fixed positions in the predefined environment to reflect electromagnetic radiation from the illumination system, a helmet-mounted imaging system sensitive to the one or more wavelength for deriving images of part of the predefined environment including electromagnetic radiation reflected from the reflectors, and a processing system associated with the imaging system for processing the images to identify regions of the images corresponding to the reflectors and hence to determine information relating to a position of the helmet within the predefined environment.

WO 2005/052718 A2